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Fishery Leaflet 215

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OUTLOOK FOR PRODUCTION, DISTRIBUTION, AND MARKETING IN

THE FISHERIES AND RELATED INDUSTRIES IN 1947

A Summary of Factors Bearing on the Fisheries

Prepared in the Division of Commercial Fisheries*

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Contents

	Page		Page
Introduction	2	Foreign outlook--Continued	14
Review of fisheries production, 1946	3	Far-East fishery	14
Technological development	4	Japan	14
Trends in the fisheries	4	Russia	16
Dehydration	5	Supply	16
Packaging	5	Domestic food	16
Food freezing	6	Fish	17
Distribution	6	Canned fish	17
Cold storage	6	Cured fish	18
Rail transportation	7	Imports of fillets	18
Motortruck transportation	8	Meat	18
Coastwise and intercoastal shipping	8	Poultry and eggs	18
Air freight	8	Cheese	18
Transportation rates	9	Fats and oils	19
Effect of increased rates on fish	10	Fish oils	19
Wholesale distribution	10	Feeds	19
Retail distribution	10	Fish meal	19
Demand and Price	11	Supplies and equipment	20
Consumer income	11	Rope	20
Price level	11	Netting	20
Fish prices	11	Scallop bags	20
Employment	12	Work gloves	20
Foreign outlook	12	Wooden containers	20
Supply	12	Nails	20
Exchange	12	Burlap barrel covers	20
European fishery	13	Fishing craft	21
		Repair costs	21
		Food processing	21
		Containers	21

* Adapted in part from findings of the Bureau of Agricultural Economics of the U. S. Department of Agriculture as reported in the 1947 Outlook issues of "Marketing and Transportation," "Food Situation," and "Demand and Price"; and the U. S. Department of Commerce in "Survey of Current Business."

INTRODUCTION

All industries are projecting plans for maintaining the high productivity achieved during the war. They are seeking every means to convert their productive capacity into products and services that consumers will buy and use. The marketing skill of all industries is concentrated on developing methods for obtaining the fullest utilization of their commodities. With each industry seeking for its products a share of the consumer's dollar, competition for consumer markets will be greater than ever before.

To aid the fishery industries in the continuing adaptation to the changing pattern of distribution, summaries of facts and factors affecting the fisheries were obtained from a number of sources and have been brought together in this report. Some of these may be of assistance in planning operations during the coming year.

Like the rest of our economy, the fisheries face difficult problems with the removal of wartime stimuli. Since the beginning of the recent war, the fishery industries of the United States have enjoyed a degree of prosperity such as they never before experienced. The requirements of the armed services for fresh and processed seafoods and the shortage of other protein foods for civilian consumption, both foreign and domestic, led to an unprecedented demand for fishery commodities. High prices and a heavy demand for fish, led the fishing industry to respond vigorously in terms of production, so that fisheries emerged from the war with great productive capacity. However, methods for maintaining at least a portion of the new markets developed during the war, received little consideration during the rush of war business.

Per capita consumption of fish has fallen to a level below that of the pre-war years, due to a lowered catch and the diversion of canned products to foreign needs. Competition for domestic fishery markets is now coming from distant sources. No longer can the fisheries look upon their domestic pre-war or war markets as exclusive property. Improvements in methods of packaging and transporting fishery products are opening up distant markets to remote fisheries. New England and Pacific Coast products are meeting in midwestern markets. Foreign competition is increasing. Imports of frozen groundfish and rosefish fillets in 1946 were five times larger than in 1940. Other protein foods too, such as meat, cheese, poultry, and eggs are seeking their place in the markets, and must be considered important contenders. How then, can at least a portion of the activity and prosperity, which fortuitous circumstances made possible, be retained?

From what we know at present, it appears that the fisheries will have greater domestic and foreign competition than they have ever before experienced. The future success of the fisheries depends upon at least four factors.

First, fishery producers and distributors must learn to appreciate the fact that fish as a food must meet the highest requirements established for foods for human consumption. It must be produced and handled under the best

possible conditions, both at sea and ashore, and must be processed and packaged in establishments which are attractive and sanitary food factories. Persons working in such plants must carry their interest in the product to a point where they take pride in turning out premium commodities.

Second, consumers must be convinced of the value of fishery products in their diet. This is a matter of market development which depends also upon the production and distribution of high quality fish.

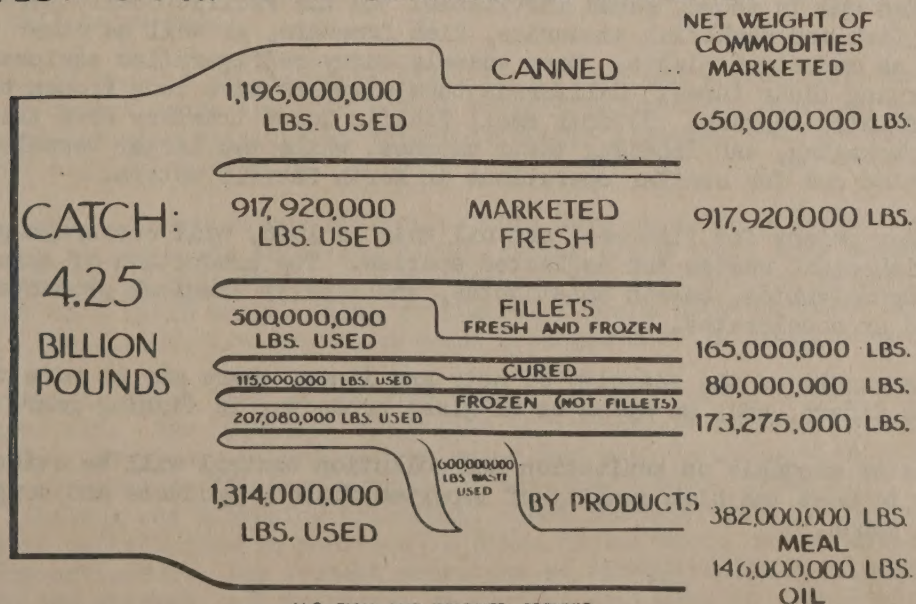
Third, the fishery industries must seek out and adopt improved methods of handling, processing, and utilizing the catch. Every advantage should be taken of available technological advances which can be used to further the fishery industries and their products. Economy and efficiency can be promoted by this means, and markets can be widened by the development of new products.

Fourth, the need is apparent for the continued development of genuine cooperation within the industry. Cooperation between all factors, from producer to retailer, will lead to progress which cannot be achieved in any other manner.

REVIEW OF FISHERIES PRODUCTION, 1946

Although the 1946 production was not far below the 1941-45 average in volume, the year was marked by extremes of success or failure almost without parallel in the history of the fisheries. Rosefish and tuna exceeded all previous production records; the salmon pack was the smallest since 1927; the menhaden catch was the largest on record; and the pilchard fishery experienced the worst season in its history. The United States and Alaska fish catch in 1946 totaled 4.25 billion pounds. The following chart shows the estimated distribution of the 1946 catch.

FLOW CHART OF THE COMMERCIAL FISHERIES - 1946



U.S. FISH AND WILDLIFE SERVICE

TECHNOLOGICAL DEVELOPMENT

Trends in the Fisheries

The trend of modern living encourages the processing of foods to a more advanced stage, to simplify the task of meal preparation in the home. Technological advances have opened the way for improved methods of preserving perishable foods, and for expanded use of byproducts.

As new equipment and packaging materials become more plentiful, there will be a tendency to freeze more fish products, to process them more rapidly, to store them at lower temperatures, and to package them in wrappers that are more attractive, and that will resist loss of moisture or ingress of air. There will be emphasis on low bacterial counts and on other conditions that make for better quality.

Factory vessels will undertake canning, filleting, freezing, and meal and oil reduction at sea. Freezing aboard ship will be extended to new fisheries. This year America's first fully-integrated factory ship is carrying a Pacific fish-packing enterprise to distant grounds. The "Pacific Explorer," an 8,500 ton vessel, departed in January for southern waters, to explore the possibilities of a U. S. factory ship operating at great distances from processing plants and home markets. During the winter months, the vessel will operate as a freezing ship in southern waters, receiving tuna from a fleet of fishing vessels and freezing it for subsequent delivery to canning plants in the United States. During the summer, activities will be transferred to northern waters, particularly the Bering Sea. Crab meat will be canned or frozen, fish filleted, packaged and frozen, fish meal and oil manufactured, and vitamin oils rendered. Accompanying the vessel are Fish and Wildlife Service observers who will later prepare complete reports, for publication, on various phases of factory ship operation.

A trend toward the performance on shipboard of certain processing functions now carried out on shore, seems inevitable. On the Pacific Coast there are floating fish and shellfish canneries, fish freezers, as well as other vessels equipped as reduction plants. Many vessels carry refrigeration equipment to assist in preserving their fares. California tuna clippers have long frozen their catches taken off Latin America. Several small Pacific Coast trawlers have tried filleting, packaging, and freezing their catches, while two larger vessels are now being fitted out for similar operations in North Pacific waters.

Higher prices for fish meal and oil than in 1946, will encourage greater use of fish-plant wastes and neglected species. The production of amino acids, protein hydrolyzates, casein substitutes, and similar chemical products may be attempted or accelerated.

As a result of the scarcity of nets and lines, there may be more use of synthetic fibers, such as nylon or of glass products, in fishing gear.

Greater emphasis on sanitation and pollution control will be evident, in order to meet the high quality of imported fishery products and competing domestic foods.

Dehydration

Some revival of interest in dehydration is apparently replacing the generally pessimistic attitude toward this method of food processing, which prevailed at the close of the war. This revival of interest has come with reports of a new method which cuts to 90 minutes the time required for drying fruits and vegetables that previously required an average of 18 hours. It is claimed that foods produced by the new method show marked improvement in taste and quality over products of other dehydrating processes.

Packaging

Interest in the pre-packaging of food products will be intensified in 1947. Many retail food store operators and some wholesalers and shippers have been carrying on experimental operations in this field. Shortages of materials and equipment have interfered with the rapid introduction of most new merchandising developments during the past few years. Easing of these shortages will permit adoption of proved practices.

Many people believe that pre-packaging will revolutionize the trade, from producer to ultimate consumer. Many merchandisers, however, view with suspicion and antagonism a development they believe might add to costs of doing business without a corresponding increase in gross returns, and hence might result in reduced profits. Pre-packaging does have certain advantages which probably will give it a growing importance in the long-time development of merchandising. Pre-packaging operations will face many problems in developing into an established competitive pattern.

Pre-packaging operations, if unaccompanied by proper refrigeration clear through to the final consumer, may prove hazardous and uneconomical. Considerable changes will have to be made in present concepts of pre-packaging and transportation, especially for long distance shipment and storage. New shipping containers and methods of loading, and further development of refrigerated transportation equipment, will be needed.

The sale of pre-cut and packaged fish, both fresh and frozen, has been increasing in recent years and this method of merchandising is expected to expand, especially when supplies of materials become plentiful and the market again becomes highly competitive.

In the past, a large number of meat packers have sold, in packaged form, such cured and smoked meats as sliced bacon, sliced dried beef, pork sausage, pork shoulders, butts and picnics. A few packers are also selling frozen, packaged meat on a small scale. Some retailers of meat, both operators of supermarkets and chains, are selling pre-cut packaged meat in fresh form.

The extent to which meat in the future will be retailed in frozen packaged form, is uncertain. The technique of preparing frozen meat apparently has been quite adequately developed. Many packers have been experimenting with frozen meats, so as to develop efficient methods of cutting, boning, freezing, packaging, labeling and utilizing trimmings. This has been done by the packers, with a view to putting them in position to place frozen meats on the market whenever it seems advisable. The present shortages of refrigeration facilities for distribution and storage, and shortages of display equipment in retail markets,

will probably be largely overcome by the time the distribution of frozen meat becomes fully developed.

The future of the frozen meat industry will depend, largely, on the reaction of consumers to buying frozen meat as compared with fresh. Relative costs per pound of frozen packaged meat compared with fresh meat, as well as consumer preferences, will play important parts here.

Fishery products are more readily adapted to this type of distribution than meats, so they are more widely found in these channels. However, further extension of this trade in 1947 will depend, to some extent, on the spread of facilities for handling frozen foods at retail.

Food Freezing

Because of the need for constant low-temperature refrigeration up to the time of the product's use by the consumer, shortage of refrigerated facilities at any one point, blocks expansion in the use of frozen foods. The existence of many millions of outmoded electrical refrigerators with inadequate frozen food storage space, presents one of the most important equipment handicaps to expanding use of frozen foods in the home. Many post-war models now going into homes are also lacking in frozen storage space.

Of concern to the fishing industry are the problems growing out of seasonal variations in the production and marketing of fish. High rates of production create a supply in excess of requirements in most markets. Periods of overabundance are followed by scarcities with resultant effect on supply, demand, and price. Relief from these difficulties can come through the provision of adequate freezer and storage capacity in each producing center.

DISTRIBUTION

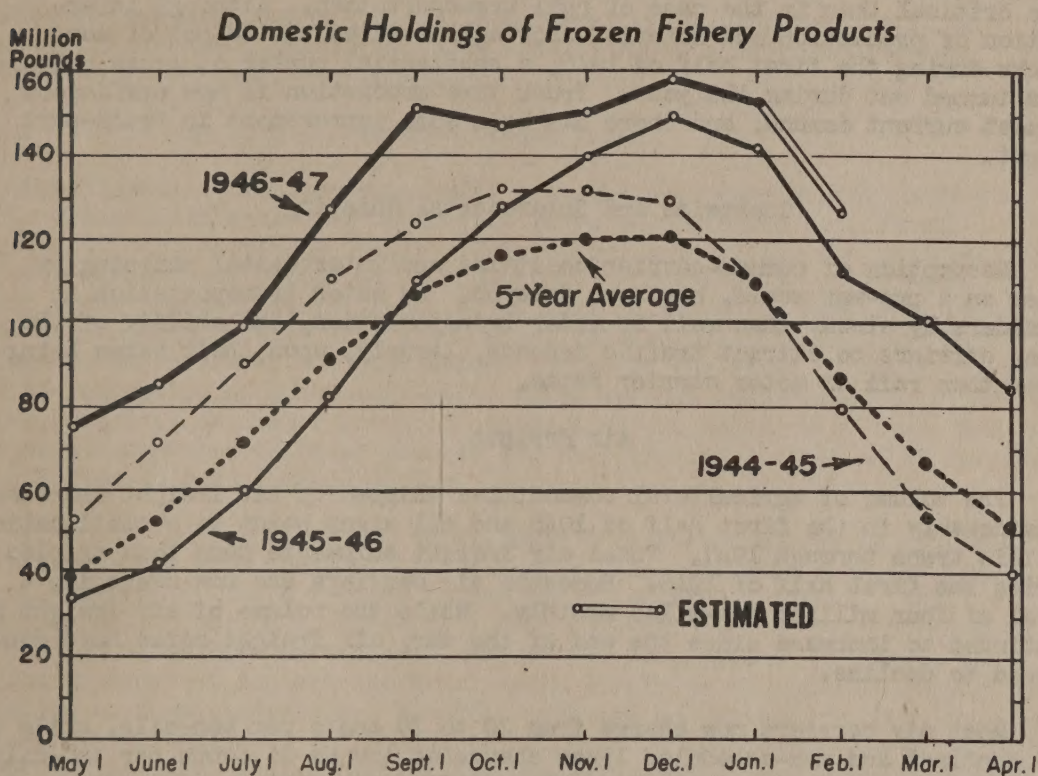
Cold Storage

During 1946, holdings of frozen fish and shellfish showed an increase for each month over both the year previous and the five-year average. Stocks totaled 153 million pounds on January 1, 1947, 13 million pounds more than holdings on January 1946, and 42 million pounds more than the five-year average for this date. Stocks of miscellaneous fillets, salmon, whiting, halibut, sablefish, and shrimp represented a little more than two-thirds of the total frozen fishery products in storage.

It is expected that there will be a period of adjustment during the early part of 1947 in the fish-freezing industry, when efforts will be made to adjust to peace-time demands. The duration of the shortage in cold-storage space will depend, largely, on the trend in freezing, and warehouses will be crowded until freezer capacity is expanded.

Many cold-storage plants were filled to capacity with fish during the latter part of 1946, but meat shortages resulted in, at least, temporary relief. In each of the last three years, short supplies of meat have assisted in marketing large supplies of frozen fish. This assistance cannot be counted upon in 1947.

Meat stocks on January 1, 1947 totaled 537 million pounds, below average for this date. Frozen poultry totaled 318 million pounds, 37 million pounds below the record-breaking stocks of January 1, 1946. Total cheese stocks on January 1 amounted to 124 million pounds, slightly below average for this date.



Rail Transportation

Shortage of rail transportation for foodstuffs which continued to hamper the marketings in 1946, is not expected to ease materially in 1947. Commodities that normally move in refrigerator cars are likely to feel the shortage most seriously.

Most of the new refrigerator cars now on order will contain many modern improvements such as fans for forced air circulation, collapsible bulkheads, half-stage icing gates or grates, and high-speed trucks. Officials of the Association of American Railroads are conducting a series of experiments with new type refrigerator cars in an effort to improve conditions for the rail shipment of quick-frozen foods. The supply of refrigerator cars is now at a low level, and the prospect for improvement in this situation is decidedly poor.

The shortage of this type of equipment, combined with the steadily rising volume of carlot shipments of fresh fruits and vegetables, will make the refrigerator car situation extremely tight in 1947.

Motortruck Transportation

Shortage of motortruck transportation in 1947 will probably be much less critical than in the case of rail transportation. Although interruption of production and material shortages lowered the output of new trucks during the first half of 1946, a substantial number of truck units were turned out during the year. Truck tire production is now sufficient to meet current demand, and there has been some improvement in truck-part output.

Coastwise and Intercoastal Shipping

Resumption of common-carrier coastwise and intercoastal shipping by water on a pre-war scale, has been delayed. As water transportation is considerably slower than rail or motor transportation, the ability of the water carriers to attract traffic depends, largely, upon their rates being lower than rail or motor carrier rates.

Air Freight

The volume of agricultural commodities shipped by air freight increased considerably in the first half of 1946 and all signs point to a continuation of this trend through 1947. Total air freight shipments more than tripled during the first half of 1946. Domestic air carriers are now averaging a total of four million ton-miles monthly. While the volume of air freight has continued to increase since the end of the war, air freight rates have continued to decline.

Most air carriers now charge from 20 to 30 cents per ton-mile, while a few contract and non-scheduled lines charge as low as 15 cents per ton-mile. Recently, one of the nation's largest certificated carriers announced a rate of 17½ cents per ton-mile. This compares with a rate of 70 cents per ton-mile in effect three years ago.

An aircraft manufacturer recently announced the development of a new cargo model which would operate for less than five cents per ton-mile. Another has revealed plans for a double-deck, all-cargo plane which, it is claimed, will operate for 3.9 cents per ton-mile.

When air-freight rates are reduced further and the gap between air and overland express and freight rates is narrowed, an increasing volume of commodities will be shipped by air freight. The gap is likely to be narrowed not only by further reductions in air rates within the next year, but also by anticipated increases in rail and truck rates.

The bulk of the freight carried by domestic air lines is handled by contract and non-scheduled carriers. The future development of air-freight shipments will be greatly affected by the action of the Civil Aeronautics Board on the applications for certification by contract and non-scheduled

carriers. If franchises are granted, the competitive position of such carriers will be greatly improved. At present the non-certificated carrier cannot solicit business from the general public.

As the volume of freight carried is increased, overhead costs will decrease; as improved planes are put into operation, flying costs will be reduced. These developments may soon result in rates based on average costs of about 10 cents per ton-mile.

Transportation Rates

Most types of transportation will cost the user considerably more in 1947. Substantial increases in freight rates were granted by a recent decision of the Interstate Commerce Commission, authorizing the railroads to increase rates by an estimated 17.6 percent, on the average, over those in effect prior to the interim increases of last July. Other carriers, chiefly motor and water carriers, will also derive revenue benefits from the rate increases authorized by the Commission. Although the rates of motor carriers, with the exception of joint rail-motor rates are not authorized to be increased by the decision, one major group of common carriers has already requested rate increases comparable to those granted the railroads, and other motor carriers are expected to take similar action.

If motor carriers seek and obtain rate increases designed to make their rates comparable with those of the railroads, the rail rate increase will divert relatively little traffic to the common carrier truckers. Some diversion will occur on a short-run basis, however, particularly in cases where motor rates have heretofore exceeded the rail rates. Diversion of traffic to contract and private truckers is likely to be somewhat greater than diversion to common carriers. The railroads may be expected to seek to prevent any serious diversion by increasing their rates to less than the full extent authorized in cases where the full increase would shift any large volume of traffic to the trucks.

The water carriers will derive fairly substantial revenue benefits from the authorized increases, although the decision itself will not have the effect of diverting much additional traffic to water movement, except possibly on a few bulk commodities. Water rates may be raised to the same extent and on the same basis as are rail rates.

Percentage increases on industrial and agricultural products have the effect, where they are applicable, of enhancing the competitive position of industries and farm producers located close to markets and to sources of raw materials. In the recent rate increase authorization, however, the Commission, in a number of instances, sought to limit percentage increases which would seriously disrupt existing competitive market relationships. In the case of many important raw materials and agricultural commodities the Commission either applied a flat increase or limited the percentage increases to a maximum amount.

The freight rate increase, while substantial, will have a relatively small effect upon total production and distribution costs, since transportation costs constitute only a small part of the delivered price of most commodities. A portion of the increase charges will be passed on to consumers, after being pyramided in many cases by application of distributors' mark-ups on cost of goods sold, and the remainder will be diffused throughout industry and absorbed by producers and distributors generally.

Effect of Increased Rates on Fish. - According to the Interstate Commerce Commission decision of December 6, 1946, new increased rates will become effective upon the filing of new tariffs by the railroads during the period January 1 to February 28, 1947. Fish and fishery products follow the general rate increase allowed by the Commission. However, the increase of the rates for fish oil is subject to a maximum of 12 cents per hundred pounds, and, for the important group, canned fish, subject to a maximum of 13 cents per hundred pounds.

The rate increases will be somewhat higher in the "official territory" (including the territory between the Mississippi River, the Great Lakes, the Atlantic Coast, and the Mason-Dixon Line) for less than carload and "any quantity" traffic. In these cases, an increase of 25 percent within official territory and 22.5 percent between official territory and points in other territories are permitted.

By a prior decision dated October 28, 1946, the Interstate Commerce Commission allowed increased express rates and charges amounting to 20 cents per hundred pounds.

Wholesale Distribution

Wholesale distribution will be improved by modern equipment. Pressure will be put on wholesalers by retailers to provide improved products to meet the increasingly competitive market, as a result of consumers becoming more selective in their purchasing. This may result in new developments in methods of handling and processing.

An eventual shift by the consumer to a more price-conscious buying will force marketing agencies to effect further savings in the costs of their services. Consumers are weighing price and quality much more carefully.

Retail Distribution

Many new trends in food retailing will be in evidence during 1947, but few radical innovations appear in prospect. Better merchandising methods, with emphasis on wider variety and improved quality, are apparent in retail distribution of perishable and semi-perishable foods. Special departments for air-borne perishables may make their appearance in some large city supermarkets. Greater interest in store attractiveness and comfort of shoppers is evident.

An upward trend in the shift to self-service operations in food retailing can be expected when restrictions on materials and building are eased. Plans for new store construction are reported centering all emphasis on self-service. Standardization of products and improvements in packaging are among trends

favorable to self-service. Some contrary influences are expected, particularly with the increase in trucks available for home delivery of foods. Increased cost of labor will help retard any general movement of independent retailers back to their pre-war service basis.

DEMAND AND PRICE

Consumer Income

Consumers' incomes will probably average higher in 1947 than in any preceding year, but the increase may not be reflected in such increased domestic demand for products as would occur under normal conditions. Post-war prosperity has not developed soundly because of delays in production and advances in costs which retarded selling until official ceilings were lifted. Higher prices reduce buying, and the quantity that can be bought. The tremendous accumulated demand for many manufactured durable goods expected in the market, probably will absorb a large share of the increased purchasing power. Therefore, consumer expenditures for nondurables as a group may not be increased.

A high level of domestic industrial activity and relatively full employment during most of 1947 will contribute substantially to higher consumer incomes. Industrial production in 1947, as measured by the Federal Reserve Board Index, may average as much as 10 percent higher than 1946 and close to 85 percent above the 1935-39 average, providing production is not retarded by major labor-management disputes. Consumer expenditures for food may average close to the very high level of 1946.

Price Level

With the end of the war, a steady advance in the index covering all wholesale prices began, which was climaxed shortly after the lapse of price controls on June 30. During the first six months of 1946, the Bureau of Labor Statistics index of wholesale prices advanced 5 percent. Further advances of 15 percent from June to August brought the total increase from January through August, to slightly more than 20 percent, 60 percent above the 1935-39 average. Most of the advance up to that time occurred in farm products and foods, which advanced about 23 and 40 percent respectively.

The broad movement of prices continued upward, with the Bureau of Labor Statistics index reaching 140 (1926, 100) during December compared with 113 during June and 129 during August. The rapidity of recent rises is shown by contrasting the rise of 24 percent during the second half of 1946 with the increase of 21 percent in wholesale prices during the 4½ years from Pearl Harbor to June 1946.

Fish Prices. - From the income angle, fish prices cannot expect any impetus. Declines will occur if speculative storing of fish should force members of the industry to sell at a loss, or if a sudden glut or increased imports create a more permanent decline of the market price in certain species.

Wholesale and retail profits may be somewhat curtailed by higher delivery expense and higher costs of packaging materials. However, as experience has shown, in transition times the wholesaler may find relief in lower purchasing prices. It is the level of primary production which will feel most the change from a seller's to a buyer's market.

Beginning shortly before the 1946 Christmas holidays, a hesitancy developed on the part of buyers. Buyers were making few firm commitments, were buying only when stocks were low, and then in small quantities, probably in anticipation of price declines. Price cuts appeared at production and wholesale levels, but were very slow in appearing at consumer levels. When the market finally settles and the shakedown period passes, there may be a heavy rush to build up inventories.

EMPLOYMENT

Total civilian employment is expected to average somewhat higher in 1947, although the possible increase over 1946 appears to be relatively small. With demobilization almost complete, further additions to the labor force can be moderate at best. In November, total civilian employment of 57 million was at record levels. Unemployment was estimated at only 2 million, close to minimum level. By the summer of 1947, employment may reach a peak perhaps 2 million higher than 1946, representing primarily additional veterans yet to enter the labor force, together with some further reduction in unemployment. Many more veterans, now students, will seek employment. An additional increase in production may be obtained through some increase in productivity per worker and longer hours of work.

FOREIGN OUTLOOK

Supply

World food supplies for the 1946-47 consumption year (August-July) are expected to be slightly larger than in 1945-46 with most of the increase in output accounted for by the deficit areas. Present levels of food energy output are associated with a marked reduction in the quality of diets owing chiefly to much smaller livestock populations and accompanying diversion of feedstuffs to direct human consumption.

Exchange

A factor which may be of some importance in affecting the flow of trade is the course of foreign exchange rates. Recent price increases have improved the competitive position of agricultural exporting countries other than the United States, although Canada recently revalued her currency upward. Most countries plan to delay readjustments in the external values of their currencies needed as a result of the war until these changes can be made as a part of the program of the International Monetary Fund.

The supply of dollar exchange available to foreign countries need not be a factor limiting exports of United States goods and services during the coming year. This is suggested by the foreign holdings of gold and dollar exchange, the large dollar resources of the new International Bank and the Export-Import Bank available for the making of new dollar loans, and the considerable unspent balances of the latter bank. In addition, U. S. imports of goods and services in 1947 are expected to be larger than in 1946. Although the supply of dollar exchange in general may not prove to be a factor limiting

total exports, certain individual countries may continue to limit purchases in the United States because of shortage of exchange.

The value of exports of United States merchandise as a whole in 1947 probably will be greater than the more than 10 billion dollars estimated for 1946. In the five years, 1935-39, exports of merchandise from the United States were valued at 2.8 billion dollars. However, in contrast to the situation before the war, a large part of the goods and services supplied foreign countries during recent years has been made possible by funds given or loaned by the U. S. Government or its agencies.

While the value of goods and services purchased by the United States from foreign countries in 1947 will be much above pre-war levels, the value of sales by the United States will greatly exceed purchases. The resulting gap will continue to be filled mainly by special financing arrangements.

It can be expected that the U. S. fishery industries will participate, to an appreciable extent, in foreign commerce which will change its characteristics from a government-controlled export to a free export in which not only products but also services, like rental of fillet machine, may be sold.

European Fishery

Although foreign fishing fleets are being rebuilt and catches of fish are increasing steadily, marketing and distribution in Europe are still disorganized principally because of exchange difficulties, lack of funds on the part of buying nations, and in some instances, transportation problems.

Full advantage is being taken of the opportunity to replace destroyed or outmoded vessels, gear and plants with the most modern equipment and recently developed processes. In some of the new trawlers now being constructed, the installation of fish filleting and freezing equipment is under consideration.

Certain technological advances achieved during the war are now undergoing further development. A plant for manufacturing pressed dried fish is in operation in Norway. Newer methods of processing fish for meal and oil are being used and considerable interest is shown in mechanized fish cleaning and filleting methods. Norway's sardines are packed in a refined herring oil, which apparently, will continue in use even though olive oil becomes more abundant.

Production and processing methods are being reexamined in order to produce superior products, with particular stress being placed on quality. In Copenhagen and Bergen, a substantial volume of the cod and flat fish are marketed alive, and the delicious flavor of the cooked fish served in the restaurants is noteworthy.

Because European markets are lagging behind potential production, European producers look upon the United States market as a very promising outlet for their surplus production and one which they may attempt to develop to a much greater extent in 1947.

At the FAO conference in Copenhagen, the Fisheries Committee recommended that the Emergency Economic Committee for Europe (EECE) continue its fisheries work during 1946-47 and that FAO undertake a study of longer-term fisheries problems. It also recommended that FAO obtain a complete report of UNRRA's work in developing fisheries, and study the possibilities of completing projects launched by UNRRA. It further recommended that FAO's Fisheries Division be staffed as promptly as possible, and that problems of surplus production and of undeveloped fishery stocks in areas of food scarcity, be studied.

Consideration of better representation for the commercial fishing industry at FAO conferences resulted in the formation of a small committee to investigate the need for and the possibilities in a non-governmental organization tentatively entitled "International Federation of Commercial Fisheries." Preliminary discussion indicated it would be similar to the recently-formed International Federation of Agricultural Producers. Membership would consist of producers, manufacturers and processors, and wholesale distributors. Fishermen organized in trade unions would not be eligible for membership, on the ground that they already have the similar representation through the International Labor Organization and the World Federation of Trade Unions.

Far-East Fishery

Japan. - Upon entry of the American Occupation Forces into Japan, they found the fishery industry in a demoralized condition. The great Japanese fisheries, formerly conducted beyond the home islands, along Asia, from the Arctic to the Antarctic, were lost to the Japanese and the fisheries at home were virtually at a standstill. All of the whaling mother ships and many of the transports had been sunk, as well as all but one of the salmon and crab factory ships. Many of the other larger ships of around 100 to 150 tons also were lost or damaged, especially those used in the tuna and bonito fisheries, and in the other trawl fisheries conducted coastwise around Japan and in the Yellow and China Seas. The elaborate fishing establishments, including ships, docks, processing plants, repair yards and similar equipment in the South Seas, Formosa, North China, Manchuria, Korea, Sakhalin, Russian Maritime Provinces and the Kurils all passed out of control of the Japanese.

Consumption of fish in Japan has been estimated up to 95 pounds per head annually, but is probably more nearly about 65 pounds. Even at the lower figure, the people of no other country eat so much fish. Total fish consumption in the Islands amounts to some 3 million tons annually.

The occupying authorities hoped that by enlargement of the original basic fishing area around Japan in June 1946, a goal of 3 million tons of aquatic products would be reached in a twelve-month period. Since fishing did not get well under way until the early spring of 1946, the goal was not reached in that year. It is believed, however, that about 2½ million tons were landed, which is about the same or slightly more than the total annual landings of fish in the United States and Alaska. It is likely that a catch

of 3 million tons will be reached in 1947. This is all intended for consumption in Japan.

To help alleviate the food shortage, the Supreme Commander for the Allied Powers in Japan authorized two Japanese whaling expeditions to the Antarctic for the season 1946-47. It is estimated that some 2,000 whales will be caught. While large quantities of whale oil will be produced, the primary purpose of these expeditions is to secure whale meat for food in Japan. Whaling activities will be conducted in strict accordance with the provisions of all the international whaling agreements. The Japanese have been prohibited from engaging in pelagic fur sealing.

To meet the needs of the Japanese people for fish, the Supreme Commander also assisted by making fuel oil and other petroleum products available for the fishing fleet, and raw cotton for the manufacture of fishing nets. These products were supplied to the Japanese government from American sources on credit derived from the sale of silk and other Japanese products in this country. No lend-lease, UNRRA, American loans, American subsidies, or other like means were utilized in the reactivation of the Japanese fishing industry.

Japan formerly produced large quantities of canned sardines, tuna, bonito, salmon, crab, and other fishery products, but Japan lost the rich salmon fisheries in northern waters. These produced, annually, some 2₂ million cases (48 one-pound cans) of canned salmon and 200,000 tons of salted salmon. The only salmon fisheries now open to the Japanese are around Hokkaido. No production of canned salmon of any account has resulted from these since 1942. It is unlikely that this source of canned salmon would add much to the American larder even if production is resumed and exports permitted to the United States during the year 1947.

Japan also lost the large and important crab fishery in northern waters, except that around Hokkaido. Operations were conducted in the latter area in 1946, and a small pack resulted. Some of this is being offered for import into the United States along with reserve stocks in Japan.

Sardines, mackerel, tuna and several other species taken in the coastwise and nearby offshore fisheries, were canned at points in Japan proper. Due to the shortage of tinplate and the great demand for fresh fish, these fish canneries have not operated since the occupation. It is unlikely that sufficient tinplate or other canning supplies will be available in 1947 to these canneries to produce an exportable surplus.

In former years the output of frozen fish was designed primarily for the export market. Now the small quantity being produced is going into domestic consumption. At present Japan is well supplied with fish-freezing plants. In addition, many of those which were destroyed during the bombing are being repaired or rebuilt. Estimates report annual production of frozen fish in pre-war years as high as 60,000 tons by some 100 freezing plants. The most important species frozen were salmon, tuna, swordfish and scallops.

One of the important marine products of Japan is agar-agar. Production during 1946 was expected to reach only 376 tons because so much of the weed is being used for food in Japan. During 1946, small shipments of agar-agar were made to the United States. Normally, exports of this product, to all countries, averaged about 1,500 tons per year.

Because of the need for fish as food, it is not likely that any quantities of fish meal will be available for export from Japan for some time.

Russia. - According to a report by the minister of the U. S. S. R. fishing industry, fishing is to be developed on a considerable scale. The five-year plan envisages a yield of 2 million tons of fish in the year 1950, a 54 percent increase above the 1940 production. Operations will be concentrated particularly in the Far East regions where they expect the yield in 1950 to exceed 1940 by 240 percent whereas the Baltic fishery is to be augmented by at least 70 percent. The new regions will be the southern coast of the Sakhalins, the Kurils, in the far eastern waters, and Koenigsberg and Vilapeida in the Baltic.

The trawler fleet on the Murmansk coast is to be increased to ensure a yield of 500,000 tons of fish in 1950, compared with 213,000 tons in 1940. In order to maintain the fleet on a highly industrial scale, a chain of radio stations, planes, and auxiliary vessels for the purpose of spotting the shoals, will be put into service. They will signal and inform the fishermen of the most productive fishing locations. Projects for the construction of 13 new conserving factories are in progress, by which it is expected to double the present production of smoked and pickled sprats in the Baltic, the conserving of cod-livers on the Murmansk coast, and the conserving of salmon and crabs in the Far East.

The freezing of fish is also to be developed. This industry is to be increased by 80 percent and 30 refrigerators are to be constructed. Moreover, the production of caviar, whole or pressed, including salmon roes, is also to be developed considerably. Factories and other installations are to be erected in the Kurils, where a large part of the catch was formerly utilized by the Japanese for the manufacture of meal and fish offal for the cultivation of rice.

The plan also envisages the best possible utilization of the rich resources of fish in the rivers, lakes and ponds. Science is to play a big part in the future development of the Soviet fisheries, and factories and plants will be the last word in modern improvements in order that the highest possible quality and greatest possible production might be achieved.

SUPPLY

Domestic Food

Domestic food supplies for 1947 probably will be about as large per person as in 1946, and retail food prices are expected to adjust gradually downward from last November's peaks. Average retail prices for the year, however, are likely to be above the average for 1946 unless consumer purchasing power declines more sharply or quickly than anticipated.

Commercial stocks of most foods are larger than a year ago, food production is likely to continue high, and imports are increasing. A larger proportion of the total food supply will go to domestic consumers this year because of the indicated reduction in military needs and total exports.

Per capita supplies of individual foods for civilian consumption in 1947 will differ somewhat from 1946. There will be less lamb and mutton, but more beef and canned fish. The average consumption of eggs is likely to decline in 1947 because of decrease in purchases with prices generally higher than in the first half of 1946. No significant changes in domestic consumption are expected for pork, fresh and frozen fish, cheese and poultry. Food production may not be quite as high as in 1946, but exports will be much smaller and imports are expected to increase.

Fish

Slightly larger supplies of fish are expected to be available for civilian consumption in 1947. However, they are not expected to reach pre-war proportions until 1948 when canned fish supplies should return to normal. Expanded fishing fleets and favorable prices during 1946, added to the supply of fresh and frozen fish available for civilian consumption. Large supplies of frozen fish were available throughout the year with a carry-over on January 1 of 153 million pounds, 13 million pounds greater than that of January 1, 1946.

Consumption leveled off in the last two months of 1946 as the supplies of other foods increased and the demand for fish declined seasonally. Wholesale and retail prices evidenced some weakness at year-end. Present prospects indicate a continued high level of fishery operations in 1947 even if prices decline somewhat.

Canned fish. - Prospects are good for a larger civilian supply of canned fish in 1947 than in 1946. The 1946 pack which totaled about 657 million pounds, was considerably below the 1935-39 average of about 690 million pounds. Government purchases declined while both imports and commercial exports increased. Packs of both salmon and pilchard were short in 1946, and it is unlikely that packs of both would be short in the same year again soon. The tuna pack, however, was the largest in history. The 1947 pack of canned fish is expected to be somewhat larger on the basis of indicated improvements in the availability of supplies, materials, and labor. Adequate supplies of canned fish to meet consumers' needs may not reach the market until late in 1947 because of the small pack of major items in 1946 and because the greater portion of the pack canned in the last half of the year, probably over 75 percent, does not ordinarily reach the consumer until late in the year, or in the following year.

Export demand for canned fish probably will continue large. Imports of canned fish are expected to increase due to improvements in conditions existing in foreign countries. Canned fishery products, particularly some Maine sardines, fish flakes, and canned crab are especially susceptible to foreign competition. Norway, Spain, Portugal, Newfoundland, and Russia are in a promising position to renew exports of canned fish to our markets. These packs may provide a considerable obstacle to the domestic industry.

Cured fish. - Much of the country's supply of cured fish is imported. During the war, imports had been held down by reduced world supplies and international allocation of available supplies. When salted groundfish are removed from international controls, imports may be expected to return to their pre-war levels of around 100 million pounds.

Imports of fillets. - Imports of groundfish fillets for the year 1946 totaled more than 50 million pounds in 1946 compared with 43 million pounds in 1945. Imports from foreign countries present an imminent problem now that the war is over, and England can satisfy its needs by bringing its fishing fleet back to pre-war size. Newfoundland, Canada, Iceland and Norway are looking with increased interest to the United States as a market for their fishery products. An important factor in the domestic import situation will be the requirements of other countries for fish. Russia and France purchased the greater portion of the 1946 Icelandic production which would otherwise have been available for export to the United States.

Meat

Meat consumption in 1947 is expected to average 150 to 155 pounds per capita, the highest since 1911. Although the supplies of meat may decline more than seasonally in the middle of the year, they will increase considerably in the late fall and winter.

Retail meat prices are likely to decline only moderately because of continued high consumer demand and seasonal reductions in pork, lamb and mutton. Prices of better-grade beef may be down substantially in the spring, as supplies of grain-fed beef increase.

Total meat production in 1947 is now forecast at around 22.8 billion pounds (dressed meat basis), 4 percent greater than in 1946. Production of beef may set a new record. Exports of meat in 1947 are likely to exceed 500 million pounds. Procurement of meat for military use in 1947 will be almost as large as the total of 870 million pounds procured in 1946. This compares with 3.6 billion pounds purchased in 1945.

Poultry And Eggs

The supplies of poultry products for civilian consumption in 1947 will be about the same as in 1946. On a per capita basis, there will be somewhat fewer eggs, slightly less chicken, but a little more turkey. Procurement of poultry products for military use probably will be somewhat smaller, and the export of eggs may be reduced. Available egg supplies may be 5 percent less and average retail prices may be higher.

Cheese

Reductions in the amount of cheese purchased for export and military use, have more than offset the drop in the output of cheese. The consumption of cheese may reach a new high in 1947 with the resumption of the long-time upward trend in the demand for cheese.

Fats And Oils

In the first six or eight months of 1947, particularly in the late spring and summer, supplies of food fats and oils, other than butter, probably will be even smaller than in the corresponding period of 1946. The anticipated output of edible vegetable oils from 1946 crops is about the same as that from crops harvested in 1945. With controls on use of oils and fats in edible products removed in late October 1946, vegetable oils moved into consumption at a substantially faster rate in the last three months of 1946 than in the previous year. Factory and warehouse stocks of corn, cottonseed, soybean and peanut oils on December 31, 1946, totaled only 490 million pounds, 282 million pounds less than a year earlier. There may be some increase in the use of imported oils in food products in 1947. Demand for food fats will remain in excess of supply.

Fish oils:

- Fish oils will be in very short supply for most of 1947. The California pilchard fishery, which normally contributes approximately one-half of the total fish oil produced in the United States, has suffered the most severe slump in its history.

Production of fish oils during 1946 totaled about 20 million gallons, 4½ million gallons less than in 1945 production and 15.7 million gallons below the 1935-39 average.

Feeds

Feed supply prospects, as a whole, are much more favorable for the coming year than they have been since 1944. Supplies of byproduct feeds, per animal unit, are expected to be at a near-record level. Output of lower-protein feeds will be considerably above the past year, and supplies of high-protein feeds probably will be fully as large when considered on the basis of supply per animal unit. Competition for available supplies is likely to be greatest for the group of high-protein feeds, the supply of which may be as large as in 1945-46. Reductions in soybean cake and meal, linseed cake and meal, and tankage meat scraps and fish meal will be offset by larger supplies of copra cake and meal, gluten feed and meal, and brewers' and distillers' dried grains. Demand for most kinds of byproduct feeds is expected to be strong during 1947, although somewhat weaker than during the past year.

Fish meal:

-- Fish meal normally contributes only a small percent of the total amount of high protein feed concentrates used by the animal and poultry industry. The presence of this ingredient is, however, very important for certain special rations. The very short supply of fish meal for 1946 and the first part of 1947 will necessitate an equitable distribution to all feed mixers of the nation. Practices of barter and maldistribution under price regulations, should disappear, to a large extent, now that ceilings have been removed. If there is a concerted effort made to blend properly the various available essential protein concentrates, the decrease of approximately 50 percent in the fish meal output of the California pilchard fishery will not seriously interfere with the nation's livestock production.

Fish meal production during 1946 amounted to about 186,000 tons, considerably below the 1935-39 average of 221,000 tons.

Supplies And Equipment

Rope:

-The supply of rope will continue about the same in 1947 as in 1946, with the exception that as greater quantities of manila become available, more rope will be made of this fiber. The reduction of the size limit on ropes which can be made of manila will make available to the fisheries, smaller sizes of this cordage. The production of rope may be somewhat retarded because many of the boats engaged in transporting fiber were tied up in port by the shipping strike.

Netting:

-Netting and netting materials such as cotton lines, will continue in short supply during 1947. Mills are operating at reduced capacity because of labor shortages, and have not been able to keep up with demand. Production, therefore, will be far short of requirements. Orders from foreign countries and UNRRA will be handled as facilities permit, but these orders will not be given a priority.

Prices for netting and rope are expected to remain high as long as there is heavy demand and limited supply, and while material and labor costs are static or rising.

Scallop bags:

-Scallop bags are expected to continue in minimum supply, but it is believed that the quantities necessary can be provided.

Work gloves:

-The shortage of work gloves that developed in 1946, is not expected to be repeated in 1947 unless labor-management controversies arise.

Wooden containers:

-The supply of wooden containers will not be ample. This will be noticed especially in the supply of barrels in the eastern and southern states, where this type of container is used extensively for shipping seafoods. Wooden boxes may be scarce for part of the year in some localities, but this situation may change, the supply depending largely on labor relations in the lumber industry.

Nails:

-The procurement of nails will continue to be difficult throughout 1947, since demands by the building trades continue heavy.

Burlap barrel covers:

-Some difficulty may be experienced in obtaining burlap barrel covers in sufficient quantities in 1947, on account of restrictions placed by the Government of India on the exportation of burlap materials.

Fishing craft:

-A large increase is evident in the number of fishing craft entering the industry. During 1946, 1,201 vessels were added to the domestic fishing fleet as compared with 741 vessels during the similar period of 1945. This will bring the fishing fleet to the largest size in history.

Repair costs:

-Repair costs for boats and vessels, and replacement costs for fishing gear probably will not change despite new union demands in the basic industries (iron, steel, lumber, machinery.) The auxiliary industries generally may be ready to accept lower profit margins in the interest of establishing permanent and constant numbers of customers.

Food Processing:

-Some of the present shortages in equipment can be expected to continue into or through the year ahead. Output of new food processing equipment has increased since the end of the war, but production has been held back by work stoppages, inventory building, and inability to obtain certain component parts. Reasonable progress toward reconversion of industry should result in gradual improvement in the situation for food processing equipment in 1947. In spite of difficulties, substantial quantities of equipment are being made and delivered now.

Containers:

-The container situation in 1947 may be slightly easier than in 1946, but the need for continued conservation and salvage is indicated. Can makers probably will be in a position to supply sufficient tin cans unless there are further interruptions of steel production.

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